

REMARKS

Claims 1-2 and 5-19 remain in the referenced application. The Examiner has rejected claims 1-19. The Applicant has amended claims 1, 7, 12, and 15. Claims 3-4 are canceled.

Claim 1-2 and 5-10 stand rejected under 35 U.S.C. §102(b) as being anticipated by Markley (United States Patent No.: 3,592,366, hereinafter denoted as “Markley”). The Examiner asserts that Markley discloses paddlewheel tangs with a primary face and a secondary face substantially symmetrical to the primary face, wherein the primary face is adapted to move a product in a first direction and the secondary face is adapted to move a product in a second direction. The Applicant has amended claim 1 to incorporate the limitations of claims 3 and 4. Amended claim 1 now recites, “a primary face disposed on an outer periphery of a truncated conical body, wherein the truncated conical body rotates about an axis of the truncated conical body; and a secondary face disposed on the outer periphery of the truncated conical body substantially symmetrical to the primary face, wherein the primary face is adapted to move a product in a first rotation direction and the secondary face is adapted to move product in a second rotation direction.” Markley clearly discloses a rotating disc that includes lifters 56 that “are secured to the forward face of the disc,” (Col. 2, Lines 30-33). Applicant’s invention is drawn to paddlewheel tangs that extend from an outer periphery of a truncated conical body. Consequently, Markley cannot anticipate Applicant’s amended claim 1, because Markley’s tangs protrude from a front face of the rotating disc. Accordingly, Applicant respectfully asserts that Applicant’s amended claim 1 is patentable over Markley, and respectfully requests that the rejection of claim 1 under 35 U.S.C. §102(b) be withdrawn.

Claim 2 stands rejected under 35 U.S.C. §102(b) by Markley. In rejecting claim 2, the Examiner asserts that Markley teaches a primary face and a secondary face disposed at an angle

of zero degrees. Applicant respectfully disagrees with the Examiner's assertion, as the term "angle" is defined by Webster's Seventh New Collegiate Dictionary, as "the figure formed by two lines extending from the same point." The Applicant respectfully asserts that Markley's lifters are parallel, and not collinear, and therefore do not have any coincident points. Therefore, parallel lines cannot be disposed at an angle. Applicant's invention teaches of disposing a primary face and a secondary face at an angle. Accordingly, Applicant respectfully asserts that claim 2 is patentable over Markley, and respectfully requests that the rejection of claim 2 under 35 U.S.C. §102(b) be withdrawn.

Claims 5 and 6 stand rejected under 35 U.S.C. §102(b) by Markley. Applicant respectfully asserts that the patentability of claims 5 and 6 lie with the patentability of amended claim 1.

Claim 7 stands rejected under 35 U.S.C. §102(b) by Markley. The Examiner asserts that Markley discloses a paddlewheel tang that includes a primary face disposed at an angle to a secondary face. Applicant has previously established in the arguments for claim 2 that Markley does not disclose a primary face disposed at an angle to a secondary face. Markley teaches "U-shaped straps" that are secured to a front face of a rotating disc. Applicant further asserts that Markley's "U-shaped straps" include legs that are disposed parallel to each other, and not collinear. Accordingly, Markley's "U-shaped straps" cannot intersect, and therefore cannot anticipate Applicant's claim 7 that recites, "a secondary face disposed at an angle to the primary face." Applicant respectfully asserts that claim 7 is patentable over Markley, and respectfully requests that the rejection of claim 7 under 35 U.S.C. §102(b) be withdrawn.

Claims 8-10 stand rejected under 35 U.S.C. §102(b) by Markley. Applicant respectfully asserts that the patentability of claims 8-10 lies with the patentability of claim 1.

Claims 1-19 stand rejected under 35 U.S.C. §102(b) by Schroeder (United States Patent No.: 5,054,654, hereinafter denoted as “Schroeder”). In rejecting claim 1, the Examiner asserts that Schroeder “discloses paddlewheel tangs with a primary face and a secondary face substantially symmetrical to the primary face (26 has two faces), wherein the primary face is adapted to move product in a first direction and the secondary face is adapted to move product in a second direction.” Applicant respectfully asserts that Schroeder discloses a tray 20 including molded vanes 26 that extend into an inner portion of the tray 20. Schroeder further discloses a cone chute 22 that does not rotate. The cone chute 22 includes a cutaway segment 25 for receiving a product. The cone chute 22 is designed to fit into the centermost portion of the circular base, such that the vanes 26 form vertical walls on the rotating tray, the circular base forms the floor for the pockets, and a rim of the cone chute completes a plurality of enclosures in the form of the wedge-shaped pockets.” The circular base of the rotating tray 20 has a plurality of openings to allow communication between the storage bin and the interior of the pocket compartments. Ice moves through the openings and into the compartments, and the tray 20 then rotates such that the product moves upward along the rim of the cone chute 22 until it reaches the opening 25, and falls into the inner portion of the cone chute 22. As such, Schroeder’s design includes a non-rotating cone chute 22, and a rotating tray 20 including vanes 26.

Applicant respectfully asserts that Applicant has amended claim 1 to recite, “a primary face disposed on an outer periphery of a truncated conical body, wherein the truncated conical body rotates about an axis of the truncated conical body; and a secondary face disposed on the outer periphery of the truncated conical body substantially symmetrical to the primary face, wherein the primary face is adapted to move a product in a first rotation direction and the secondary face is adapted to move product in a second rotation direction.” Applicant

respectfully asserts that Schroeder's cone chute 22 cannot rotate, because the cutaway segment 25 must remain in an orientation that allows for the product to be moved upward along the rim of the cone chute 22 until it is over the cutaway segment 25, thereby allowing the product to fall into the interior of the cone chute 22. Rotation of Schroeder's cone chute 22 would greatly hinder the function of Schroeder's ice dispenser, as ice would be delivered in an irregular manner. If the cone chute 22 rotated with the tray 20, only one chamber would deliver ice to the cutaway segment 25. If the cone chute 22 rotated at a different rate than the tray 20, then the amount of ice delivered to the cutaway segment 25 would be variable. Consequently, Applicant respectfully asserts that Schroeder does not disclose a truncated conical body that rotates with the vanes 26, and therefore, cannot anticipate Applicant's amended claim 1 that is drawn to a tang including faces disposed on an outer periphery of a truncated conical body that rotates with the tang. Accordingly, Applicant respectfully asserts that claim 1 is patentable over Schroeder, and respectfully requests that the rejection of claim 1 under 35 U.S.C. §102(b) be withdrawn.

Claims 2, 5, and 6 stand rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that the patentability of claims 2, 5, and 6 lies with the patentability of claim 1.

Claims 3 and 4 stand rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that claims 3 and 4 have been canceled, and the rejections of claims 3 and 4 under 35 U.S.C. §102(b) by Schroeder are now moot.

Claim 7 stands rejected under 35 U.S.C. §102(b) by Schroeder. The Examiner asserts that Schroeder discloses a paddlewheel tang with a primary face for moving a product in a first direction, a secondary face at an angle to the primary face, wherein the secondary face moves a product in a second direction, and a crossbar disposed between the primary face and the

secondary face to increase the shear strength of the tang. Applicant respectfully disagrees with the Examiner's assertion, as Schroeder discloses, "The tray has a plurality of wedge-shaped pocket compartments which are individually separated by vanes 26 that rise perpendicularly from a circular base," (Col. 4, Lines 44-46). Clearly, Schroeder's vanes 26 do not include angled faces, and are disposed perpendicular to the circular base. Further, Schroeder discloses only a vane extending perpendicularly from a circular base, which is not a crossbar. Applicant's invention is drawn to a primary face connected to a crossbar that is connected to the secondary face. Schroeder clearly shows a single face disposed between two perpendicular faces (Figure 3). Based on the foregoing arguments, Applicant respectfully asserts that claim 7 is patentable over Schroeder, and respectfully requests that the rejection of claim 7 under 35 U.S.C. §102(b) by Schroeder be withdrawn.

Claims 8, 9, and 10 stand rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that the patentability of claims 8, 9, and 10 lies with the patentability of claim 1.

Claim 11 stands rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that Applicant has amended claim 11 to depend from claim 1, and that the patentability of claim 11 lies with amended claim 1.

Claim 12 stands rejected under 35 U.S.C. §102(b) by Schroeder. In rejecting claim 12, the Examiner asserts that Schroeder discloses a paddlewheel with a truncated conical body (22) having an outer periphery; and tangs disposed about an outer periphery of the truncated conical body, the tangs including a primary face coupled to a substantially symmetrical secondary face, wherein each face is equally adapted to move a product, and further wherein the truncated conical body may be rotated in either direction to move the product. As argued in the response

to claim 7, Applicant respectfully asserts that Schroeder does not provide a truncated conical body that rotates with the tangs. Schroeder discloses tangs that rotate about a stationary cone chute 22 including a cutaway segment 25 that allows a product to enter the interior portion of the cone chute 22. Applicant further respectfully asserts that Applicant has amended claim 12 to recite, “tangs disposed on the outer periphery of the truncated conical body, the tangs including a primary face coupled to a substantially symmetrical secondary face, wherein each face is equally adapted to move a product, and further wherein the truncated conical body may be rotated in either direction to move the product.” Applicant respectfully asserts that Schroeder’s tangs are not coupled to Schroeder’s cone chute 22, and therefore Schroeder’s tangs rotate about the Schroeder’s stationary cone chute 22. Applicant’s invention is drawn to a truncated conical body including tangs disposed on the truncated conical body, wherein the truncated conical body rotates about an axis, thereby moving the tangs with the truncated conical body. Accordingly, Applicant respectfully asserts that Applicant’s claim 12, as amended, is patentable over Schroeder, and respectfully requests that the rejection of claim 12 under 35 U.S.C. §102(b) be withdrawn.

Claims 13, 14, and 19 stand rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that that the patentability of claims 13, 14, and 19 lies with the patentability of claim 12.

Claim 15 stands rejected under 35 U.S.C. §102(b) by Schroeder. The Examiner asserts that Schroeder discloses, “a paddlewheel with a truncated conical body having an outer periphery, and tangs disposed along the outer periphery of the truncated conical body, the tangs including a primary face coupled to a secondary face, wherein each face is equally adapted to move product, such that the truncated conical body may be rotated in either direction to move the

product, and further wherein the tangs include a crossbar to increase the inertial properties of the tangs.” Applicant respectfully asserts that Applicant has amended claim 15 to recite, “tangs disposed on the outer periphery of the truncated conical body.” As previously presented in the arguments for claim 12, Schroeder does not provide a truncated conical body that rotates. Schroeder discloses a cone chute 22 that does not rotate, and further does not include tangs disposed on an outer periphery of the cone chute 22. Schroeder discloses paddlewheel tangs that rotate about a stationary cone chute 22. Accordingly, Applicant respectfully asserts that Applicant’s amended claim 15 is patentable over Schroeder, and respectfully requests that the rejection of claim 15 under 35 U.S.C. §102(b) be withdrawn.

Claims 16 through 18 stand rejected under 35 U.S.C. §102(b) by Schroeder. Applicant respectfully asserts that that the patentability of claims 16 through 18 lies with the patentability of claim 12.

Claim 1 stands rejected under 35 U.S.C. §102(b) by Sorbie (U.S. Patent No.: 3,599,780, hereinafter referred to as “Sorbie”). In rejecting claim 1, the Examiner asserts that Sorbie discloses paddlewheel tangs with a primary face and a secondary face substantially symmetrical to the primary face, wherein the primary face is adapted to move a product in a first direction and the secondary face is adapted to move product in a second direction. Applicant respectfully asserts that Applicant has amended claim 1 to include the recitation of the primary face and the secondary face disposed on an outer periphery of a truncated conical body,” and therefore, the rejection of claim 1 under 35 U.S.C. §102(b) by Sorbie is now moot.

Applicant respectfully asserts that Sorbie does not disclose a truncated conical body upon which the primary and secondary faces of the tang are disposed. Sorbie discloses a shaft 10 that is cylindrical in shape, and a mounting plate 11 secured to the shaft 10. As shown in Figure 1,

Sorbie's mounting plate 11 is circular in shape. Sorbie further discloses a "cylindrical mounting hub 15." Sorbie, still further, discloses a pocketed star wheel 17 secured to the hub 15.

Applicant respectfully contends that Sorbie's star wheel 17 is in the form of a circular plate.

Applicant respectfully contends that Sorbie's shaft 10, by definition, is cylindrical in shape, Sorbie's mounting plate 11 is cylindrical in shape, and Sorbie's mounting hub 15 is described as, "a generally cylindrical mounting hub 15." Accordingly, Applicant respectfully asserts that Sorbie does not disclose a "truncated conical body" upon which a primary face and a secondary face are disposed, and therefore cannot anticipate Applicant's amended claim 1, that is drawn to a primary face and a secondary face disposed on an outer periphery of a truncated conical body. Accordingly, Applicant respectfully asserts that Applicant's amended claim 1 is patentable over Sorbie, and respectfully requests that the rejections of claim 1 under 35 U.S.C. §102(b) be withdrawn.

Claim 2 stands rejected under 35 U.S.C. §102(b) by Sorbie. Applicant respectfully asserts that the patentability of claim 2 lies with the patentability of claim 1.

Claim 3 stands rejected under 35 U.S.C. §102(b) by Sorbie. Applicant has incorporated the limitations of claim 3 into amended claim 1. Accordingly, claim 3 has been cancelled, and the rejection of claim 3 under 35 U.S.C. §102(b) is now moot.

Claim 5 stands rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie discloses a primary face and a secondary face having an equivalent effective contact area. Applicant respectfully asserts that Sorbie discloses pockets in a star wheel 17, and does not disclose the pockets in detail. Applicant respectfully asserts that it is not possible to discern whether Sorbie's primary face and secondary face are equally sized from Sorbie's disclosure. Applicant further respectfully asserts that the Examiner's assertion is beyond the scope of the

disclosure, and therefore, is improper. Accordingly, Applicant respectfully asserts that claim 5 is patentable over Sorbie, and respectfully requests that the rejection of claim 5 under 35 U.S.C. §102(b) be withdrawn.

Claim 6 stands rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie discloses delivering substantially the same amount of product in either direction.

Applicant respectfully disagrees with the Examiner, as Sorbie does not teach rotating the star wheel 17 in multiple directions. As shown in Figure 1, Sorbie provides a guide rail 22 that keeps the glassware in the pockets. Sorbie provides a guide rail 22 on only one side of the star wheel 17, thereby keeping the glassware during a counter-clockwise rotation from falling out of the pockets. Accordingly, Sorbie cannot rotate his star wheel 17 clockwise because he will deliver the glassware out of the conveying system if he rotates his star wheel 17 clockwise. As such, the Sorbie clearly cannot deliver products in both directions, and clearly cannot anticipate Applicant's claim 6 that is drawn to delivering substantially the same amount of product in either rotation direction. Accordingly, Applicant respectfully asserts that claim 6 is patentable over Sorbie, and respectfully requests that the rejection of claim 6 under 35 §U.S.C. 102(b) be withdrawn.

Claim 7 stands rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie discloses a paddlewheel tang with a primary face for moving product in a first direction, and a secondary face for moving product in a second direction. Applicant respectfully asserts that the arguments for claim 6 are pertinent to claim 7, as Sorbie fails to disclose delivering product in a second rotation direction. Accordingly, Applicant respectfully asserts that claim 7 is patentable over Sorbie, and respectfully requests that the rejection of claim 7 under 35 U.S.C. §102(b) be withdrawn.

Claims 8 and 9 stand rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie is capable of moving ice, as well as ice cubes. Applicant respectfully disagrees with the Examiner, as Sorbie's star wheel 17 is of a plate construction, and therefore, not conducive to moving ice or ice cubes. Sorbie's invention is designed for use in a horizontal plane, and therefore must provide multiple star wheels 17 to move tall glassware. As shown in Figure 2, the star wheels 17 are spaced apart such that the multiple star wheels 17 do not tip the glassware over. Applicant respectfully contends that the movement of ice or ice cubes requires a pushing face, otherwise the contact point of a device will move through the ice cubes. Accordingly, Applicant respectfully asserts that claims 8 and 9 are patentable over Sorbie, and respectfully requests that the rejection of claims 8 and 9 under 35 U.S.C. §102(b) be withdrawn.

Claim 10 stands rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie discloses a tang having a rounded crest. Applicant respectfully disagrees. As previously argued, Sorbie discloses a star wheel 17 that is shaped like a plate. The plate further includes pockets (recesses) for accepting glassware. Applicant respectfully asserts that Applicant's invention is drawn to tangs, wherein a "tang" is defined as, "a projecting prong," (Webster's Seventh New Collegiate Dictionary). Sorbie's tangs are really large portions of his star wheel 17 that extend between the pockets. A large portion of his "star wheel 17" does not form a "projecting prong." Applicant's invention is drawn to a tang projecting from a truncated conical body. Accordingly, Applicant respectfully asserts that claim 10 is patentable over Sorbie, and respectfully requests that the rejection of claim 10 under 35 U.S.C. §102(b) be withdrawn.

Claim 12 stands rejected under 35 U.S.C. §102(b) by Sorbie. The Examiner asserts that Sorbie discloses a truncated conical body having an outer periphery upon which tangs are disposed. Applicant respectfully disagrees with the Examiner, because Sorbie does not disclose

a truncated conical body. While the Examiner has cited a truncated conical body in Figure 3, the Applicant contends that the truncated conical body in Figure 3 is part of a drive mechanism, and is not referred to by Sorbie. The truncated conical body cited by the Examiner seems to be a bearing or other shaft restraint, and not part of Sorbie's star wheel 17. Further, Sorbie's pockets are not in communication with the truncated conical body, and therefore cannot anticipate Applicants claim 12 that is drawn to a paddlewheel having a truncated conical body including tangs disposed around an outer periphery of the truncated conical body. Accordingly, Applicant respectfully asserts that claim 12 is patentable over Sorbie, and respectfully requests that the rejection of claim 12 under 35 U.S.C. §102(b) be withdrawn.

Claims 13-14 and 18-19 stand rejected under 35 U.S.C. §102(b) by Sorbie. Applicant respectfully asserts that the arguments for claim 12 are pertinent to claim 13-14 and 18-19, as Sorbie fails to disclose a truncated conical body. Accordingly, Applicant respectfully asserts that claims 13-14 and 18-19 are patentable over Sorbie, and respectfully requests that the rejections of claims 13-14 and 18-19 under 35 U.S.C. §102(b) be withdrawn.

Claim 1 stands rejected under 35 U.S.C. §102(b) by Glass et al., (U.S. Patent No.: 6,607,096, hereinafter referred to as "Glass"). In rejecting claim 1, the Examiner asserts that discloses paddlewheel tangs with a primary face and a secondary face substantially symmetrical to the primary face (303), wherein the primary face is adapted to move product in a first direction and the secondary face is adapted to move product in a second direction. The Applicant respectfully asserts that claim 1 has been amended to include the recitation of the primary face being "disposed on an outer periphery of a truncated conical body, wherein the truncated conical body rotates about an axis of the truncated conical body." Applicant further respectfully asserts that Glass does not disclose a truncated conical body attached to his tangs, and therefore the

rejection of claim 1 under 35 U.S.C. §102(b) has been overcome. Applicant respectfully contends that claim 1 is patentable over Glass, as Glass discloses a star shaped wheel (303) for moving product. Applicant's amended claim 1 is drawn to a tang including a primary face and a secondary face that is disposed on an outer periphery of a truncated conical body. Accordingly, Applicant respectfully asserts that claim 1 is patentable over Glass and respectfully requests that the rejection of claim 1 under 35 U.S.C. §102(b) be withdrawn.

Claim 2 and 5 stand rejected under 35 U.S.C. §102(b) by Glass. Applicant respectfully asserts that the patentability of claims 2 and 5 lies with the patentability of claim 1.

Claim 6 stands rejected under 35 U.S.C. §102(b) by Glass. The Examiner asserts that Glass discloses delivering substantially the same amount of product in either direction. Applicant respectfully disagrees with the Examiner, as Glass does not teach rotating the star (303) in multiple directions. As shown in Figure 3, Glass's star (303) includes a single direction rotation arrow. Applicant further respectfully asserts that if Glass did rotate his star (303) counter clockwise, the product would move backwards through the channel, and his measuring devices would not function properly, thereby rendering his device inoperable. As such, Glass, clearly, cannot anticipate Applicant's claim 6 that is drawn to delivering product in both rotation directions. Accordingly, Applicant respectfully asserts that Applicant's claim 6 is patentable over Glass, and respectfully requests that the rejection of claim 6 under 35 U.S.C. §102(b) be withdrawn.

Claims 8 and 9 stand rejected under 35 U.S.C. §102(b) by Glass. Applicant respectfully asserts that the patentability of claims 8 and 9 lies with the patentability of claim 1.

The prior art made of record has been reviewed by Applicant and is deemed not to anticipate nor render obvious the claimed invention.

In view of the foregoing, Applicant respectfully requests reconsideration of the rejected claims, and solicits early allowance of the subject application.

Respectfully submitted,

LAW OFFICES OF CHRISTOPHER L. MAKAY
1634 Milam Building
115 East Travis Street
San Antonio, Texas 78205
(210) 472-3535

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BY: 

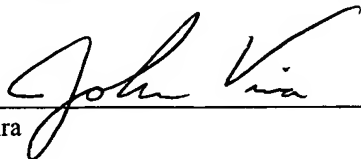
Christopher L. Makay
Reg. No. 34,475

ATTORNEY FOR APPLICANT

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John Vira